In the Specification

Page 16, line 24 –page 18, line 4:

The voltage and current sensors 82 transmit signals representative of the voltage developed across, and current flowing in, the first motor 26 to a ~~second~~ third microprocessor 84. The ~~second~~third microprocessor also receives pulses from the first rotary encoder 28 and generates a signal representative of the load torque developed by the first motor 26, which is transmitted to the attenuator 66. The ~~second~~ third microprocessor 84 implements a model of the motor, which is explained in greater detail below with reference to Figure 14. The attenuated torque signal is transmitted to the second PI controller 68 to cause the second motor 32 to generate a torque proportional to the load torque generated by the first motor, which torque opposes the rotation of the handwheel 14, as previously described.

Turning to Figure 14, this shows the model implemented by the ~~second~~ third microprocessor 84. In the following description it is to be assumed that signals representative of a particular variable are signals representative of the Laplace transform of that variable. The ~~second~~ third microprocessor receives a signal representative of the voltage applied to the first motor 26, and the current through it and a signal representative of the angular displacement of the rotor of the first motor from a reference orientation. From previous angular displacement signals the ~~second~~ third microprocessor determines the actual speed of rotation of the rotor of the first motor. Using the model an estimate of the motor current and speed may be made. The estimated speed of the motor enables a signal representative of the back emf generated by the first motor to be generated. The back emf signal is subtracted from the motor voltage signal to generate a signal representative of the estimated voltage across the windings of the first motor. The ~~second~~ third microprocessor uses the estimated windings voltage signal to generate a signal representative of the motor current and of the total electrical torque generated by the first motor 26. The ~~second~~ third microprocessor also generates a signal representative of a predicted load torque generated by the first motor by comparing the actual current and speed against the estimates and subtracts the signal representative of the predicted load

torque from the signal representative of the total electrical torque to generate a signal representative of the accelerating torque developed by the first motor. The ~~second~~ third microprocessor generates a signal representative of the estimated speed of rotation of the rotor of the first motor from the accelerating torque signal, from which the back emf signal referred to earlier is generated.

The ~~second~~ third microprocessor generates from the estimated rotor speed signal a signal representative of the estimated angular displacement of the rotor from the reference orientation and compares the estimated angular displacement signal with a signal representative of the actual angular displacement of the rotor generated by the first rotary encoder 28. The ~~second~~ third microprocessor adjusts the predicted load torque signal to reduce the difference between the actual and estimated angular displacement signals and the difference between the actual and estimated motor current.

Page 19, lines 6 – 11:

Figure 13 shows a hand whisk 94 in accordance with the first aspect of the invention. It will be appreciated that the electric hand whisk has two chucks (not shown in Figure 13), one for each whisking element 96 and 98. The hand whisk 94 has a handwheel 100 and a handle 102. In this embodiment of the invention the handle 102 is not foldable, since the whisk can be disabled simply by unplugging it from the mains electricity outlet to which it is connected.

Page 20, lines 15 – 20:

Figure 16 shows an improved arrangement of a handwheel that forms part of a cordless drill. The handwheel 110 is mounted on a shaft 112 that is attached to the body of the drill. A portion of the body is shown in Figure 16, denoted by reference numeral 114. A compression spring 115 is accommodated in a recess in the body and acts on a brake block 116. The brake block is covered by a felt pad 118 and arranged such that the action of the spring urges the felt pad 118 into engagement with a rear face of the handwheel 110.

In the Drawings

Corrected drawings are attached hereto and submitted herewith. Approval is requested.